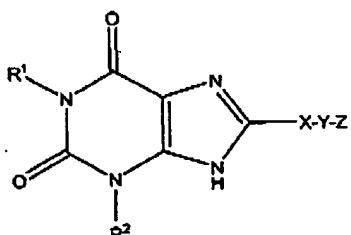


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### APPENDIX A

#### CLEAN COPY OF CLAIMS AS AMENDED HEREIN

1. A process for the preparation of a compound of Formula I:



Formula I

wherein:

R<sup>1</sup> and R<sup>2</sup> are independently optionally substituted alkyl;

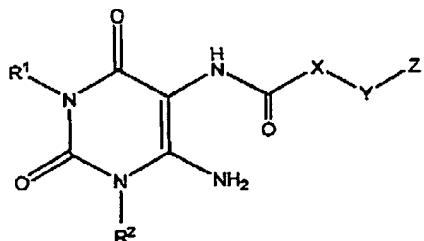
X is pyrazol-4-yl;

Y is a covalent bond or lower alkylene; and

Z is optionally substituted monocyclic aryl or optionally substituted monocyclic heteroaryl;

comprising;

cyclizing a compound of the formula (3):



(3)

wherein R<sup>1</sup>, R<sup>2</sup>, X, Y, and Z are as defined above.

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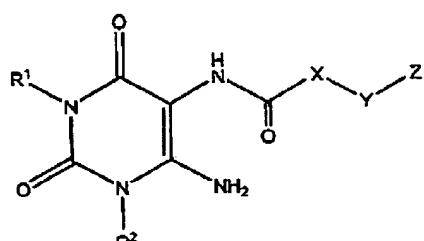
2. The process of claim 1, wherein the compound of formula (3) is cyclized in an inert solvent in the presence of a base.

3. The process of claim 2, wherein the inert solvent is methanol and the base is aqueous sodium hydroxide solution.

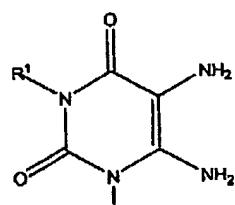
4. The process of claim 3, wherein R<sup>1</sup> and R<sup>2</sup> are independently lower alkyl, Y is methylene, and Z is optionally substituted phenyl.

5. The process of claim 4, wherein R<sup>1</sup> is n-propyl, R<sup>2</sup> is ethyl, and Z is 3-trifluoromethylphenyl.

6. The process of claim 1, wherein the compound of formula (3):



is prepared by a method comprising contacting a compound of the formula (2);



with a compound of the formula Z-Y-X-CO<sub>2</sub>H in the presence of a carbodiimide or with a compound of the formula Z-Y-X-C(O)Hal, where Hal is chloro or bromo.

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7. The process of claim 6, wherein the compound of formula (3) is reacted with a compound of the formula Z-Y-X-CO<sub>2</sub>H in methanol.

8. The process of claim 7, wherein the carbodiimide is 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide.

9. The process of claim 6, wherein the compound of formula (3) is reacted with a compound of the formula Z-Y-X-C(O)Cl.

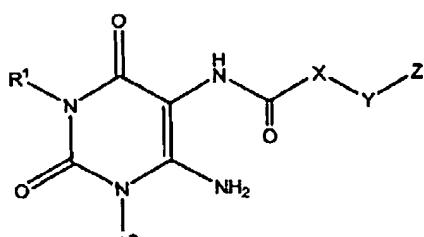
10. The process of claim 9, wherein the reaction is carried out in an inert solvent in the presence of a tertiary base.

11. The process of claim 10, wherein the inert solvent is acetonitrile and the tertiary base is triethylamine.

12. The process of claim 6, wherein R<sup>1</sup> and R<sup>2</sup> are independently lower alkyl, X is pyrazol-4-yl, Y is methylene, and Z is optionally substituted phenyl.

13. The process of claim 12, wherein R<sup>1</sup> is n-propyl, R<sup>2</sup> is ethyl, and Z is 3-trifluoromethylphenyl, namely 3-ethyl-1-propyl-8-{1-[{(3-trifluoromethylphenyl)methyl]pyrazol-4-yl}-1,3,7-trihydropurine-2,6-dione.

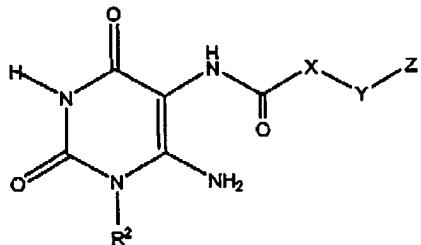
14. The process of claim 1, wherein the compound of the formula:



(3)

is prepared by a method comprising contacting a compound of the formula;

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(16)

with a compound of the formula  $R^1L$ , in which L is a leaving group.

15. The process of claim 14, wherein  $R^1$  is lower alkyl optionally substituted by cycloalkyl, and L is iodo.

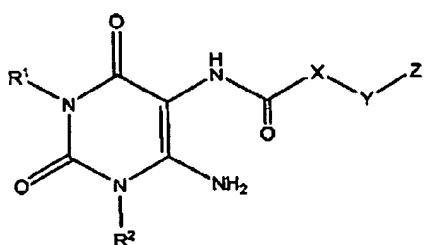
16. The process of claim 15, wherein the reaction is carried out in the presence of a base in an inert solvent.

17. The process of claim 16, wherein the base is potassium carbonate and the inert solvent is N,N-dimethylformamide.

18. The process of claim 17, wherein  $R^1$  and  $R^2$  are independently lower alkyl, X is pyrazol-4-yl, Y is methylene, and Z is optionally substituted phenyl.

19. The process of claim 18, wherein  $R^1$  is n-propyl,  $R^2$  is ethyl, and Z is 3-trifluoromethylphenyl.

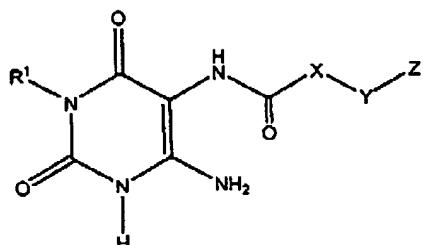
20. The process of claim 1, wherein the compound of the formula:



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(3)

is prepared by a method comprising contacting a compound of the formula;



(13)

with a compound of the formula R²L, in which L is a leaving group.

21. The process of claim 20, wherein R² is lower alkyl optionally substituted by cycloalkyl, and L is iodo.

22. The process of claim 21, wherein the reaction is carried out in the presence of a base in an inert solvent.

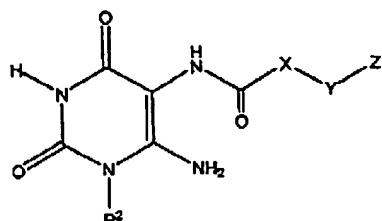
23. The process of claim 22, wherein the base is potassium carbonate and the inert solvent is N,N-dimethylformamide.

24. The process of claim 23, wherein R¹ and R² are independently lower alkyl, X is pyrazol-4-yl, Y is methylene, and Z is optionally substituted phenyl.

25. The process of claim 24, wherein R¹ is n-propyl, R² is ethyl, and Z is 3-trifluoromethylphenyl.

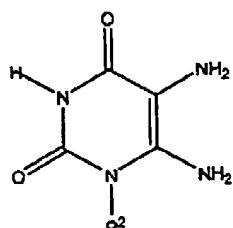
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26. The process of claim 14, wherein the compound of the formula:



(16)

is prepared by a method comprising contacting a compound of the formula:



(15)

with a compound of the formula Z-Y-X-CO<sub>2</sub>H in the presence of a carbodiimide or with a compound of the formula Z-Y-X-C(O)Hal, where Hal is chloro or bromo.

27. The process of claim 26, wherein the compound of formula (15) is reacted with a compound of the formula Z-Y-X-CO<sub>2</sub>H in methanol.

28. The process of claim 27, wherein the carbodiimide is 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide.

29. The process of claim 26, wherein the compound of formula (15) is reacted with a compound of the formula Z-Y-X-C(O)Cl.

30. The process of claim 29, wherein the reaction is carried out in an inert solvent in the presence of a tertiary base.

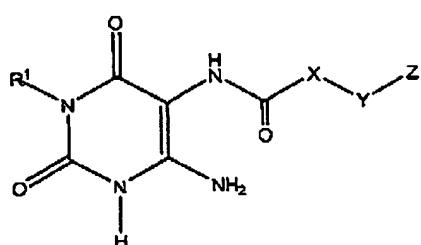
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31. The process of claim 30, wherein the inert solvent is acetonitrile and the tertiary base is triethylamine.

32. The process of claim 31, wherein R<sup>1</sup> and R<sup>2</sup> are independently lower alkyl, X is pyrazol-4-yl, Y is methylene, and Z is optionally substituted phenyl.

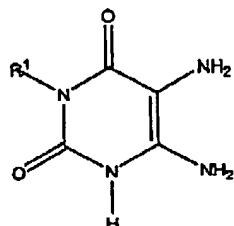
33. The process of claim 32, wherein R<sup>1</sup> is n-propyl, R<sup>2</sup> is ethyl, and Z is 3-trifluoromethylphenyl.

34. The process of claim 19, wherein the compound of the formula:



(13)

is prepared by a method comprising contacting a compound of the formula:



(12)

with a compound of the formula Z-Y-X-CO<sub>2</sub>H in the presence of a carbodiimide or a compound of the formula Z-Y-X-C(O)Hal, where Hal is chloro or bromo.

35. The process of claim 34, wherein the compound of formula (12) is reacted with a compound of the formula Z-Y-X-CO<sub>2</sub>H in methanol.

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36. The process of claim 35, wherein the carbodiimide is 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide.

37. The process of claim 34, wherein the compound of formula (12) is reacted with a compound of the formula Z-Y-X-C(O)Cl.

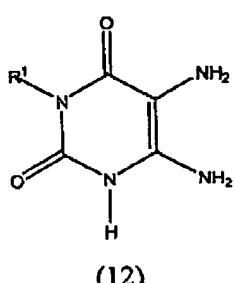
38. The process of claim 37, wherein the reaction is carried out in an inert solvent in the presence of a tertiary base.

39. The process of claim 38, wherein the inert solvent is acetonitrile and the tertiary base is triethylamine.

40. The process of claim 39, wherein R<sup>1</sup> and R<sup>2</sup> are independently lower alkyl, X is pyrazol-4-yl, Y is methylene, and Z is optionally substituted phenyl.

41. The process of claim 40, wherein R<sup>1</sup> is n-propyl, R<sup>2</sup> is ethyl, and Z is 3-trifluoromethylphenyl.

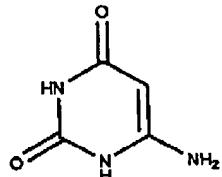
42. The process of claim 34, wherein the compound of the formula:



is prepared by a method comprising the steps of:

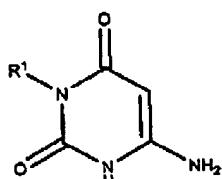
a) contacting a compound of the formula:

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with hexamethyldisilazane in the presence of an acid catalyst;

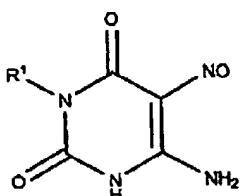
- b) contacting the product thus formed with  $R^1L$ , where L is a leaving group,  
 followed by;
- c) contacting the product thus formed:



(10)

with a mixture of sodium nitrite in acetic acid/water; and

- d) contacting the product thus formed:



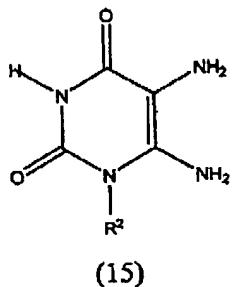
(11)

with a mixture of aqueous ammonia and sodium dithionite.

43. The process of claim 42, wherein in step a)  $R^1$  is lower alkyl, L is iodo,  
 and the acid catalyst is ammonium sulfate.

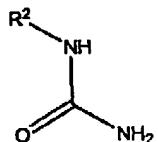
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44. The process of claim 26, wherein the compound of the formula:



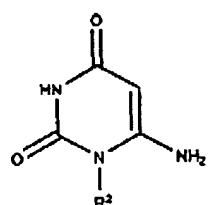
is prepared by a method comprising the steps of:

a) contacting a compound of the formula:



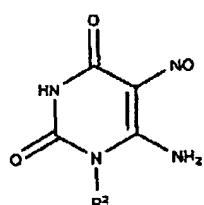
with ethyl cyanoacetate in the presence of a base in a protic solvent;

b) contacting the product thus formed:



with a mixture of sodium nitrite in acetic acid/water; and

c) contacting the product thus formed:

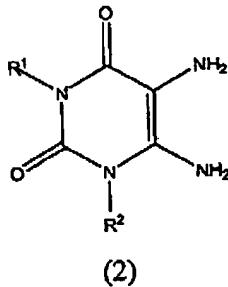


with a mixture of aqueous ammonia and sodium dithionite.

45. The process of claim 44, wherein the base is sodium ethoxide and the protic solvent is ethanol.

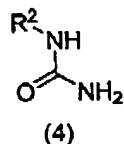
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46. The process of claim 6, wherein the compound of formula:



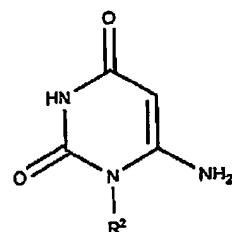
is prepared by a method comprising the steps of:

a) contacting a compound of the formula:



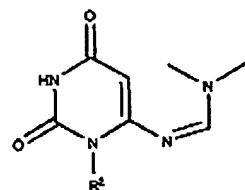
with ethyl cyanoacetate in the presence of a base in a protic solvent;

b) contacting the product thus formed:



with the dimethylacetal of N,N-dimethylformamide;

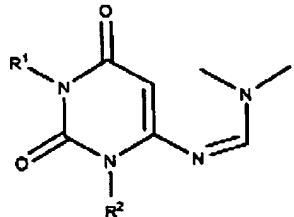
c) contacting the product thus formed:



with a compound of formula  $\text{R}'\text{L}$ , in which L is a leaving group;

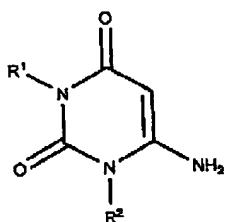
d) contacting the product thus formed:

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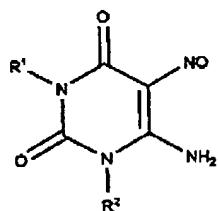
with aqueous ammonia;

e) contacting the product thus formed:



with a mixture of sodium nitrite in acetic acid/water; and

f) contacting the product thus formed:



with a mixture of aqueous ammonia and sodium dithionite.

47. The process of claim 46, wherein the base is sodium ethoxide and the protic solvent is ethanol.

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